CASSETTE CAR STEREO
WITH FM/AM ELECTRONIC TUNER

SUPER TUNER

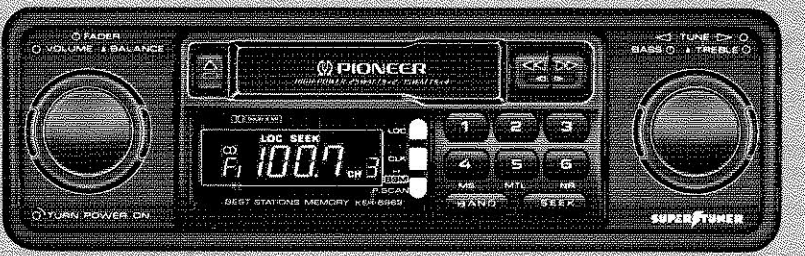
OWNER'S MANUAL

Thank you for purchasing this PIONEER product. Before attempting operation, be sure to read this manual.

Nous vous remercions d'avoir acheté cet appareil PIONEER. Avant de l'utiliser, prendre soin de lire ce manuel.

Muchas gracias por la adquisición de este producto PIONEER. Antes de tratar de operarlo, lea atentamente este manual.

شكرا لك على شرائك جهاز بايونير هذا. قبل محاولة تشغيله تأكد من قراءة هذا الدليل.



KEH-6969

PIONEER®

The Art of Entertainment

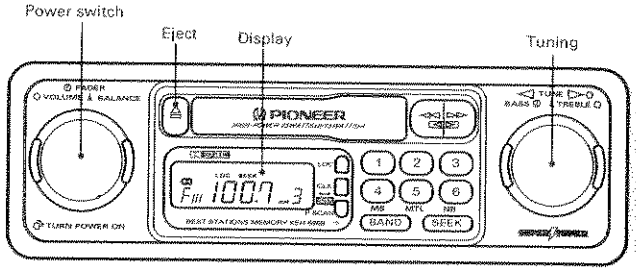
KEH-6969
KEH-4949

Features

- Built-in highly sensitive "Super Tuner" for automatic control of stereo separation, muting and frequency characteristics to match the strength of the FM signal.
- The Best Stations Memory automatically memorizes the six best (strongest) stations in the six preset buttons in the order of their strength.
- For AM reception, a tuning step is switchable to the other according to the zonal frequency range.
- Auto reverse function eliminates the need to turn the cassette over and allows uninterrupted playback.
- Built-in Dolby B NR for reduced tape hiss.
  (This feature is provided for the KEH-6969.)
- Music search function allows automatic playback from the beginning of the selection being played or the beginning of the next selection.
  (This feature is provided for the KEH-6969.)
- Choice of either 4-speaker or 2-speaker system is possible. When the 4-speaker system (15 W x 4) is used, volume of front and rear speakers can be adjusted independently, for optimum sound balance. The 2-speaker system (25 W x 2) provides more than enough power for clear, high-fidelity playback.
- Built-in 12-hour format digital clock.

- Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.
  "DOLBY" and the double-D symbol ⧈ are trademarks of Dolby Laboratories Licensing Corporation.

Switching the Tuning Steps



KEH-6969

• Changing the tuning step

The tuning steps of the AM band for this unit can be switched between 9 kHz and 10 kHz per step. The tuning step should be switched from 9 kHz (which is preset at the factory) to 10 kHz when this unit is used in North America, Central America, or South America.

1. Press the eject button to eject the cassette, and then turn left the power switch to turn off the power.
2. The AM band tuning step is changed by turning power on (turn right the power switch) while holding the tuning knob turned left or right. It should be noted that changing the tuning step also deletes frequencies stored in the tuning memories.

- Changing the vehicle's battery sets the tuning steps and frequency range settings to their initial setting.

Specification		Initial Setting	New Setting
AM	Tuning steps	9 kHz steps	10 kHz steps
	Frequency range	531 – 1,602 kHz	530 – 1,710 kHz

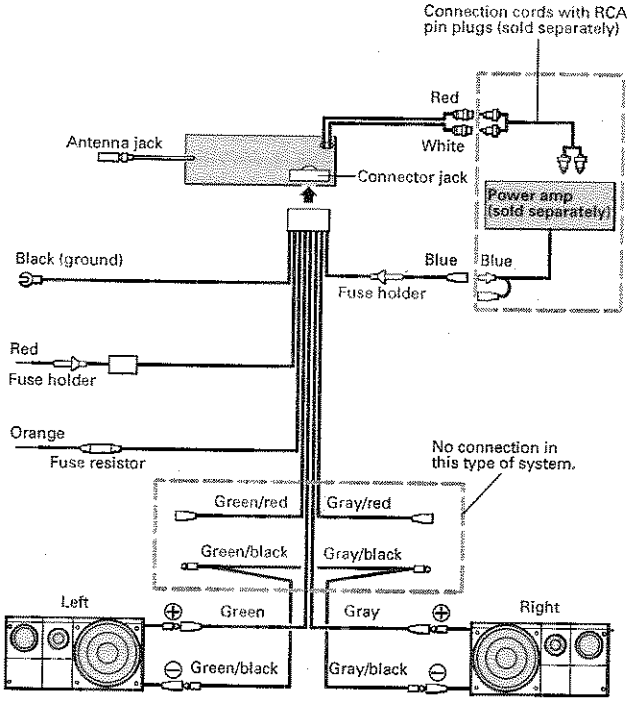
Connections

Note:

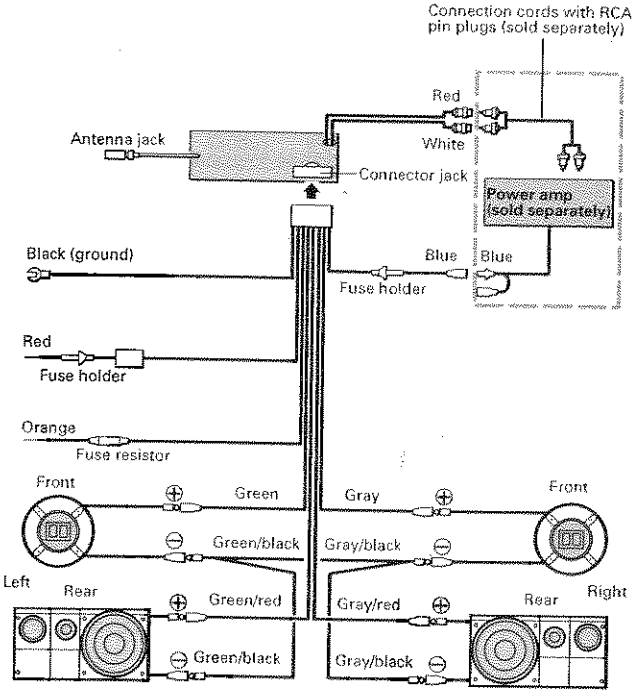
- To avoid shorts in the electrical system, be sure to disconnect the battery ⊖ cable before beginning installation.
- Replace fuses only with the types stipulated on the fuse holder.
- Be sure to properly connect the color coded leads. Failure to do so can cause malfunctions.
- Cover unused terminals with tape to prevent electrical shorts.
- Refer to the power amp owner's manual when connecting a power amp (sold separately) to the RCA pin jack.
- Since a unique BPTL circuit is employed, never wire so the speaker leads are directly grounded or the left and right speaker ⊖ leads are common.
- Speakers connected to this unit must be a high-power type possessing maximum input of at least 25 W and impedance of 4 to 8 ohms. Connecting speakers with output and/or impedance values other than those noted here can damage the speakers.
- When the power amp. is being linked with this system, be sure not to connect the blue lead to the amp.'s power terminal. Likewise, when linking this system with the auto-antenna, do not connect to power terminal for the antenna. Such connection can make overcurrent causing malfunctions.

Black (ground)	To vehicle (metal) body.
Red	To electric terminal controlled by ignition switch (12 V DC) ON/OFF.
Orange	To terminal always supplied with power regardless of ignition switch position.
Blue	If this unit is combined with a power amp, connect its blue lead to the blue lead (system control terminal) of the power amp. If combined with an auto-antenna, connect its blue lead to the relay control terminal of the auto-antenna. (MAX. 300 mA, 12 V DC)

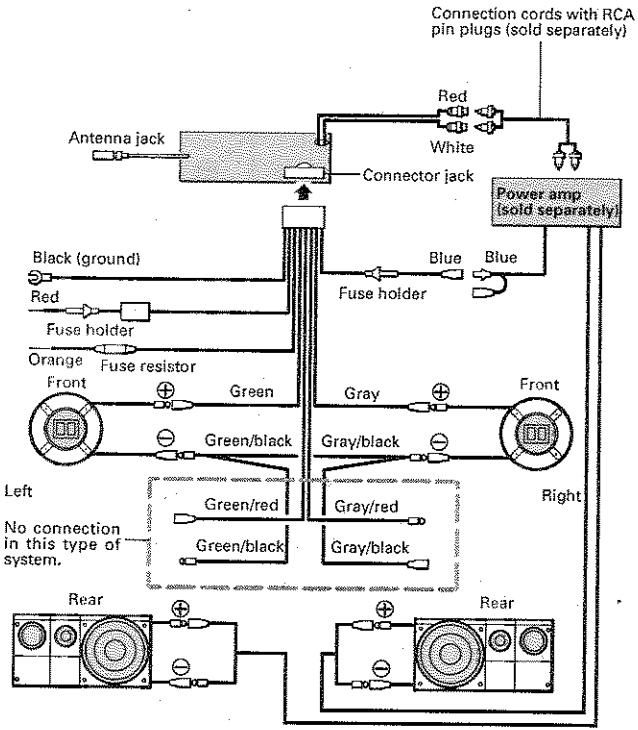
2-speaker system



4-speaker system 1



4-speaker system 2



Installation

Note:

- Use only the parts included with the unit to ensure proper installation. The use of unauthorized parts can cause malfunctions.
- Consult with your nearest dealer if installation requires the drilling of holes or other modifications of the vehicle.
- If installation angle exceeds 30° from horizontal, the unit might not give its optimum performance. (Fig. 1)

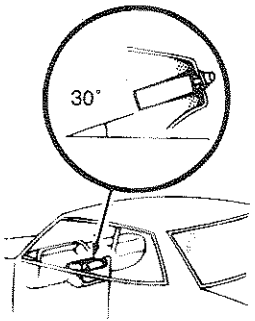
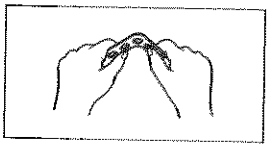
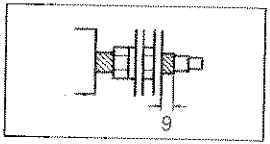


Fig.1

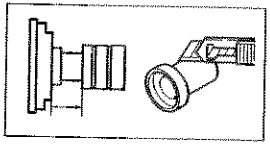
Strap
Be sure to use the strap to secure the back of the unit in place to prevent wow and flutter. The strap can be bent by hand to the desired angle.



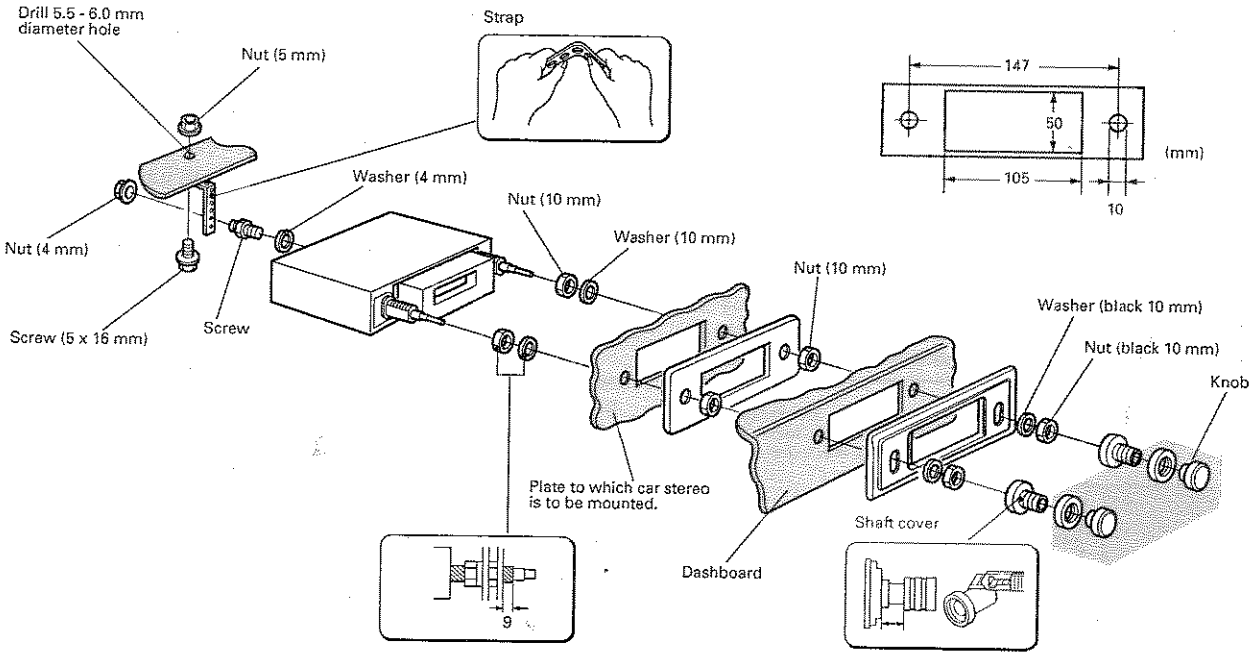
If the shaft extends from the dashboard more than 9 mm, use the supplied nut and washer to adjust the length.



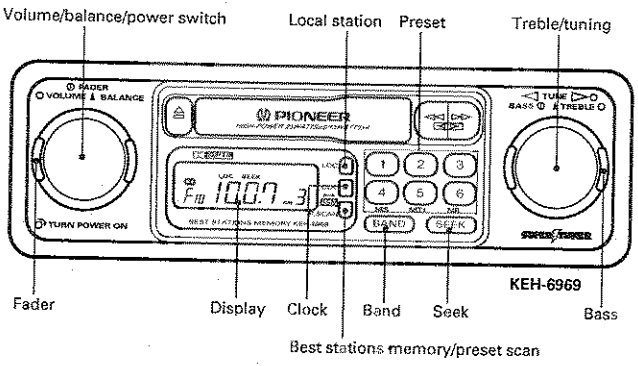
Shaft cover
Cut the shaft cover to the proper size to fill any gap which may occur between the front panel and control knob.

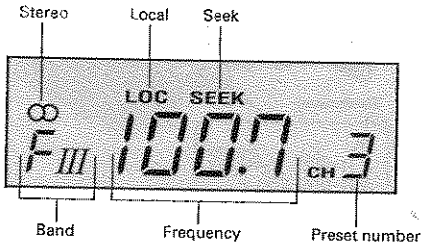


• Dimensions for installation



Using the Radio





- **Before attempting operation...**
- Set the fader control to the center position.

1. Turning the power switch to the right causes power to switch ON and the current frequency to appear on the display.

- Since the set is designed preferentially for tape play, eject a cassette tape, if mounted, before operating the radio.

2. Press the band switch to select the band.
3. Press the seek button and the seek tuning indicator will be displayed.
4. Turn the tuning knob to the left or right to tune in the desired frequency. (Turning to the right will increase the frequency.)
5. Adjust the volume and balance.
   To adjust the balance, first pull the knob until a click is heard. After setting to the desired level, push the knob in again to its original position.
6. Adjust the tone.
   To adjust the treble, first pull the knob until a click is heard. After setting to the desired level, push the knob in again to its original position.

- **To enter a frequency into the preset memory...**

7. Hold down one of the preset buttons (1-6) for approximately two seconds. The frequency is stored in memory (assigned to the preset button pressed) once the preset number stops flashing on the display.
   Six FM1 frequencies, six FM2 frequencies, six FM3 frequencies and six AM frequencies can be entered.

• Auto-Loudness
When playing back a tape or listening to the radio at low volume, the low tone is automatically emphasized.

• Clock Switch
Each press causes the display to switch between clock and frequency.

• Best Stations Memory Button
Automatically tunes strong frequencies and assigns them to preset buttons 1 through 6 for one-touch automatic tuning. The best stations memory function is activated by pressing this button for approximately 2 seconds. The best stations memory function is indicated by – – – flashing on the display, and this function can be canceled by pressing the band switch. The frequency display returns once the best stations memory function is complete. The frequency displayed at this time is of the strongest station assigned to preset button 1 by the best stations memory function.

- 6 best (strongest) frequencies are memorized in the 6 preset buttons in the order of their strength, the strongest one being assigned to preset button 1.
- The frequencies previously assigned to the preset buttons are retained when 6 frequencies cannot be located.
- The best stations memory is in operation while – – – is flashing on the display.

• Local Station Switch
Pressing this switch increases the seek threshold level so that only relatively strong stations can be tuned in (local indicator will illuminate on the display). Local seek threshold level can be selected among four levels for FM and two levels for AM.
Holding this switch down for approximately 2 seconds and then turning the tuning knob to the right changes the display from L-1, L-2, L-3 to L-4. Turning the tuning knob to the left changes the display from L-4, L-3, L-2 to L-1. (L-1 and L-2 for AM.) The bigger the number, the higher the seek threshold becomes and only relatively strong stations can be tuned in.

• Fader Control
This control is used to adjust the balance between the front and rear speakers when using a 4-speaker system. Turning the control to the left decreases the volume of the rear speakers, while turning it to the right decreases the volume of the front speakers. With 2-speaker systems, set this control to the center position.

Important
The output of power amp. (sold separately) is not affected by fader control when this unit is linked with the power amp.

Seek Tuning

Press the seek button, and tuning to the next higher or lower broadcast on the band can be accomplished automatically by simply turning the tuning knob to the left or right. FM frequencies change in 50 kHz steps while those in the AM band change in 9 kHz steps.

- AM frequencies are tuned in 10 kHz steps after the tuning steps are changed.

Preset Scan Tuning

Pressing the preset scan button (CH indicator flashes) causes previously stored frequencies to be tuned in sequentially for eight seconds each. Press again when the desired frequency is tuned in to cancel preset scan tuning.

Preset Tuning

Pressing the preset button instantly tunes in the frequency programmed in the memory for that button.

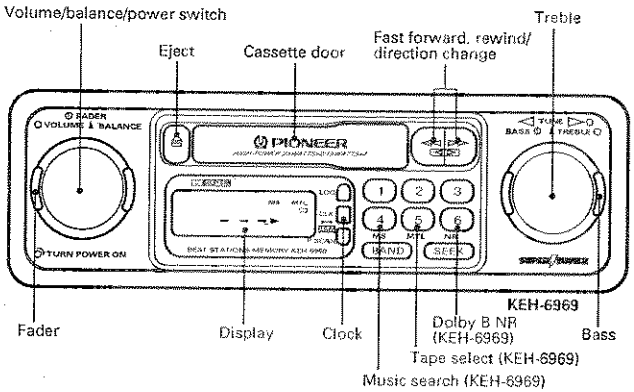
Manual Tuning

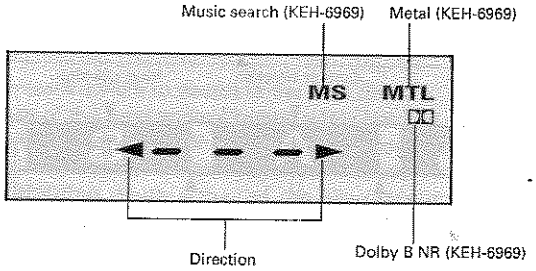
When manual tuning is employed, FM frequencies change in 50 kHz steps while AM frequencies change in 9 kHz steps.

- AM frequencies are tuned in 10 kHz steps after the tuning steps are changed.

1. Press the seek button and the seek tuning indicator will disappear from the display.
2. Change the frequency by turning the tuning knob to the left or right. Turning the knob once will change the frequency one step (see above). Holding the tuning knob in either direction will successively change the frequency at the prescribed step.

Using the Tape Deck





- **Before attempting operation...**
- Set the fader control to the center position.

1. Turning the power switch to the right causes power to switch ON.
2. Loading a cassette tape into the load slot causes playback to begin automatically.
3. Adjust the volume and balance.
   To adjust the balance, first pull the knob until a click is heard. After setting to the desired level, push the knob in again to its original position.
4. Adjust the tone.
   To adjust the treble, first pull the knob until a click is heard. After setting to the desired level, push the knob in again to its original position.
5. When tape playback reaches the end of the tape, playback will automatically switch from the side being played to the opposite side (ie. Side A to Side B or vice versa) (Auto-reverse). To eject the tape during playback, press the eject button.

- A loose or warped label on a cassette tape may interface with the eject mechanism of the unit or cause the cassette to become jammed in the unit. Avoid using such tapes or remove such labels from the cassette before attempting use.
- Do not try to eject the cassette immediately after insertion, as it will cause malfunction. Wait a few seconds.
- Loose tapes should be rewound with the aid of a pencil and unevenly wound tapes rewound with the use of the fast forward function.
- Be sure to eject the tape when the vehicle's ignition is turned OFF. Leaving the tape in the unit can deform the pinch roller causing wow and flutter during tape playback.

• Fast Forward/Rewind

Since the transport can be in either direction, both the left and right high-speed tape transport buttons can be regarded as fast forward/ rewind buttons.

For fast forward, press the high-speed tape transport button that corresponds to the direction that is shown by the direction indicator. When the end of the tape is reached, playback will automatically begin from the opposite side of the tape (Auto-reverse).

For rewind, press the button that is opposite that of the direction shown by the direction indicator. When the end of the tape is reached, playback will automatically begin from the beginning of the same side of the tape (Auto-replay).

Fast forward and rewind can be terminated by pressing the respective opposite high-speed tape transport button.

• Direction Change

Push the fast forward and rewind buttons together to switch from one side of the tape to the other (from Side A to Side B or vice versa).

• Tape Select Switch (KEH-6969)

This switch is used to switch to the proper mode for the tape being used and should be depressed when using chrome or metal tapes.

• Dolby B NR Switch (KEH-6969)

Press when playing a tape recorded with Dolby NR.

Music Search (KEH-6969)

• Returning to the beginning of selection A

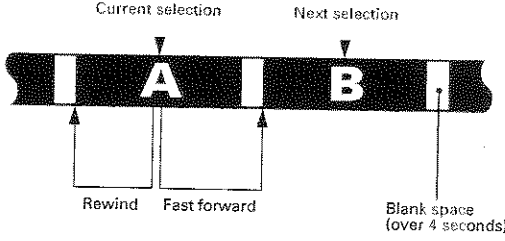
Press the music search button and then the high-speed tape transport button for the direction opposite that is shown by the direction indicator. Playback will automatically start from the beginning of selection A.

• Moving from selection A to selection B

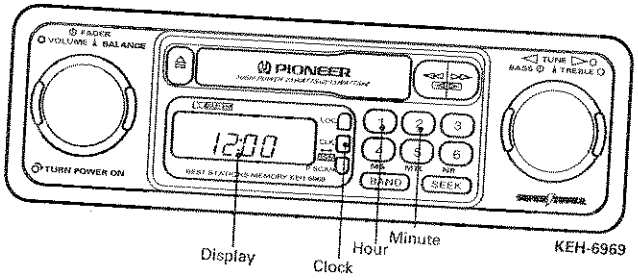
Press the music search button and then the high-speed tape transport button that corresponds to the direction shown by the direction indicator. Playback will automatically start from the beginning of selection B.

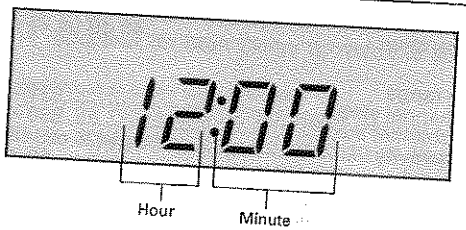
To enable regular fast forward/rewind operations, press the music search button again to turn the function OFF. The following errors will cause the music search function to operate improperly, even though the unit is not malfunctioning.

- Unrecorded "blank" portions between selections less than 4 seconds → the blank portion cannot be detected by the unit.
- Pauses in recorded conversations longer than 4 seconds → the unit reads these as blanks between selections.
- Portions recorded at very low volume for more than 4 seconds → the unit reads these as blanks between selections.



Setting the Time





1. Press the clock switch to switch to the time display.
2. Each press of the hour control button while holding down the clock switch advances hour display by one hour. Each press of the minute control button advances minute display one minute. Holding down either of the hour/minute control buttons advances the respective hour/minute display at high speed.

Care and Maintenance

- Do not use tapes longer than C-90-type (90 min.) cassettes. Longer tapes can interfere with tape transport.
- If the playback head becomes dirty, sound quality will suffer. Periodically (once or twice a month) clean the head with a cotton swab soaked with alcohol. (Fig.1)
- Storing cassettes in areas directly exposed to sunlight or high temperatures can distort them and subsequently interfere with tape transport. (Fig.2)
- Store unused tapes in a tape case where there is no danger of them becoming loose or being exposed to dust.
- Frequencies and times stored in memory can be lost when the vehicle's battery is replaced. If this should occur, reprogram the preset memory.

- **After Service**

In the event this unit does not function properly, contact your dealer or the nearest authorized PIONEER Service Center.

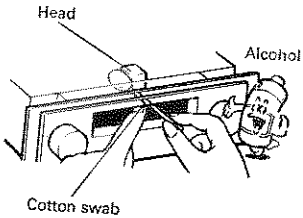


Fig.1

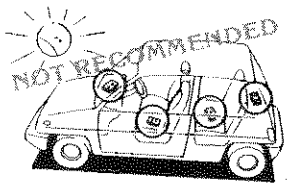


Fig.2

Specifications

General

Power source ..... 14.4 V DC (10.8 – 15.6 V allowable)
Grounding system ..... Negative type
Max.current consumption ..... 7.0 A
Dimensions (chassis) ..... 178(W) x 50(H) x 140(D) mm
(nose) ..... 104(W) x 48(H) x 34(D) mm
Shaft interval ..... 147 mm
Weight 1.3kg

Amplifier

Continuous power output is 10 W per channel min. into 4 ohms, both channels driven 50 to 15,000 Hz with no more than 5% THD.
Maximum power output ..... 25 W x 2/15 W x 4 (EIAJ)
Load impedance ..... 4 Ω (4 – 8 Ω allowable)
Preout output level/impedance 500 mV/1kΩ
Tone controls
(bass) ..... ±10 dB (100 Hz)
(treble) ..... ±10 dB (10 kHz)
Loudness contour ..... +8 dB (100 Hz) (volume: – 30 dB)

Tape player

Tape ..... Compact cassette tape (C-30 – C-90)
Tape speed ..... 4.8 cm/sec.
Fast forward/rewind time ..... Approx. 100 sec. for C-60
Wow & flutter ..... 0.13% (WRMS)
Frequency response
(KEH-6969) ..... Metal: 40 – 17,000 Hz (±3 dB)
(KEH-4949) ..... 40 – 14,000 Hz (±3 dB)
Stereo separation ..... 45 dB
Signal-to-noise ratio
(KEH-6969) ..... Metal: Dolby B NR IN: 63 dB (IEC-A network)
Dolby NR OUT: 55 dB (IEC-A network)
(KEH-4949) ..... 52 dB (IEC-A network)

FM tuner

Frequency range ..... 87.5 – 108 MHz
Usable sensitivity ..... 11 dBf (1.0 µV/75Ω mono, S/N: 30 dB)
50 dB quieting sensitivity ..... 16 dBf (1.7 µV/75Ω, mono)
Signal-to-noise ratio ..... 70 dB (IEC-A network)
Distortion ..... 0.3 % (at 65 dBf, 1 kHz, stereo)
Frequency response ..... 30 – 15,000 Hz (±3 dB)
Stereo separation ..... 40 dB (at 65 dBf, 1 kHz)

AM tuner

Frequency range
(9 kHz channel step) ..... 531 – 1,602 kHz
(10 kHz channel step) ..... 530 – 1,710 kHz
Usable sensitivity ..... 18 µV(25 dB) (S/N: 20 dB)
Selectivity ..... 50 dB (±9 kHz)
50 dB (±10 kHz)

Note:

Specifications and the design are subject to possible modification without notice due to improvements.

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